

read_latlon_usgsmask.F90 for ...

[knemunai](#) 50 posts since

Apr 16, 2008 I have successfully used UMD_601KMmask with UMD_601KM land cover. When I try to use the usgs_veg_umdmask for land cover with UMD_601KMmask, I get the following error (with r1352):

PGFIO-F-242/unformatted read/unit=11/illegal operation on direct access file.

File name = UMD/UMD_601KMmask.1gd4r unformatted, direct access record = 0

In source file ../params/landcover/latlon/read_latlon_usgsmask.F90, at line number 82

PGFIO-F-242/unformatted read/unit=11/illegal operation on direct access file.

I looked at both read_latlon_usgsmask.F90 and read_latlon_umdmask.F90 and found a few differences.

1. Different open statements (the use of "trim")

UMD: open(ftn,file=trim(lis%mfile(nest)),form='unformatted',recl=4, &
access='direct',iostat=ios1)

USGS: open(ftn,file=lis%mfile(nest),form='unformatted',recl=4, &
access='direct',iostat=ios1)

2. The use of "n" for USGS

```
integer :: n
```

```
...
```

```
num_lon_pts = nint( ( lis%lc_gridDesc(n,4) - lis%lc_gridDesc(n,2) ) / &  
lis%lc_gridDesc(n,5) ) + 1
```

```
...
```

```
line = (glnr-1)*num_lon_pts+glnc  
read(ftn,rec=line) localmask(c,r)
```

This read statement is what the complaint is about. Should num_lon_pts be using "nest" instead of "n"? I could not find where "n" is initialized. Tags: landcover, lis, usgs

[cbblanke](#) 38 posts since

Apr 18, 2008 1. **Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 5, 2008 11:19 AM

I think you are on the right track. It looks to me like "n" and "nest" should be combined into a single variable. The comments for the argument list calls the first argument "n". Now I am trying to figure out why this routine is working for me.

Clay

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read_latlon_usgsmask.F90 for ...

Apr 16, 2008 2. **Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 6, 2008 5:23 PM

A while back Sujay suggested that I go in the src/params/landcover/latlon/read_latlon_usgsmask.F90 and print these few variables out

line1

line2

num_lon_pts

line

ftn

I tried to do this and files were created, but they were all empty

[sujay](#) 118 posts since

Sep 20, 2007 3. **Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 12, 2008 10:03 AM

Kodi,

I am sorry I don't quite remember our old exchange on this issue. Can you please the following things:

1. Filesizes (UMD, USGS, masks)
2. Include your lis.config (Are you using usgs veg file with the UMD mask? or the USGS mask?)
3. Please add the use of 'trim' to the filename in the USGS part of the code.

Thanks,

-Sujay

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Apr 16, 2008 4. **Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 12, 2008 11:25 AM

in response to: [sujay](#) 1. File sizes

UMD_601KM.1gd4r - 2.16 GB

UMD_601KMmask.1gd4r - 2.16 GB

usgs_veg.1gd4r - 2.16 GB

usgs_veg_umdmask.1gd4r - 2.16 GB

2. lis.config is attached. I am using the usgs_veg_umdmask file with the UMD land mask. I don't have a USGS mask to use with usgs_veg.1gd4r. I have used the UMD mask file with the UMD veg file with LIS v5. With pre-LISv5 I used the usgs_veg_umdmask and UMD_601KMmask with the UMD mask.

3. I added trim. When I tried to run LIS I got:

PGFIO-F-242/unformatted read/unit=11/illegal operation on direct access file.

PGFIO-F-242/unformatted read/unit=11/illegal operation on direct access file.

File name = ./UMD/UMD_601KMmask.1gd4r unformatted, direct access record = 0

In source file ../params/landcover/latlon/read_latlon_usgsmask.F90, at line number 82

File name = ./UMD/UMD_601KMmask.1gd4r unformatted, direct access record = 0

read_latlon_usgsmask.F90 for ...

In source file ../params/landcover/latlon/read_latlon_usgsmask.F90, at line number 82

[sujay](#) 118 posts since

Sep 20, 2007 **5. Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 16, 2008 9:07 AM

in response to: [knemunai](#) Hi Kodi,

I think you forgot to attach the lis.config file. The error message seem to suggest that the code is not computing the record identifier correctly (It is trying to read record 0) . This probably might be a bug in your lis.config file.

-S

[knemunai](#) 50 posts since

Apr 16, 2008 **6. Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 16, 2008 9:32 AM

in response to: [sujay](#) This is the 3rd time I've tried to post my lis.config. Not sure what I'm doing wrong.

<http://res.mesonet.org/~knemunai/LIS/lis.config> **Attachments:**

- [lis.config.txt](#) (21.1 K)

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Sep 20, 2007 **7. Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 16, 2008 10:48 AM

in response to: [knemunai](#) Hi Kodi,

Thanks for sending. I added a few extra checks in this routine. Can you please run 'svn update' and run the code again?

If the code still fails, can you print out the following variables:

line1, line2, num_lon_pts, glnc, glnr?

Thanks,

-S

[knemunai](#) 50 posts since

Apr 16, 2008 **8. Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 16, 2008 10:26 PM

in response to: [sujay](#) Sujay,

I updated and re-ran the code. Here are the variables you asked for:

line1 = 9450

line2 = 8281

The other 3 did not print anything.

These were new in the lisout file

p1_6073: p4_error: interrupt SIGSEGV: 11

read_latlon_usgsmask.F90 for ...

p3_15198: p4_error: interrupt SIGx: 13

p2_15160: p4_error: interrupt SIGx: 13

p0_6034: p4_error: interrupt SIGx: 13

p0_6034: (8.039062) net_send: could not write to fd=6, errno = 32

The liserr file

Killed by signal 2.

Killed by signal 2.

Killed by signal 2.

I also noticed that there is now text in the lisdiag files. I attached one of them.

Thanks,

Kodi **Attachments:**

- [lisdiag.0000.txt](#) (2.2 K)

[sujay](#) 118 posts since

Sep 20, 2007 **9. Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 17, 2008 11:48 AM

in response to: [knemunai](#) Kodi,

Looks like the 'line2' value is wrong based on your domain numbers. It should be :

$(-100.105+179.995)/0.01 + 1 = 7990$

Not sure why you are getting 8281.

Can you print `lis%gridDesc(nest,5)`, `lis%lc_gridDesc(nest,2)` and `lis%gridDesc(nest,9)`

-Sujay

[knemunai](#) 50 posts since

Apr 16, 2008 **10. Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 17, 2008 1:10 PM

in response to: [sujay](#) Sujay,

`lis%gridDesc(nest,5) = -100.1050`

`lis%lc_gridDesc(nest,2) = -179.9950`

`lis%gridDesc(nest,9) = 9.9999998E-03`

-Kodi

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Sep 20, 2007 **11. Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 17, 2008 2:01 PM

in response to: [knemunai](#) Kodi,

read_latlon_usgsmask.F90 for ...

We found an error in the code, but it still doesn't explain this arithmetic problem. If you feed the numbers, you can see that line2 value that you see is incorrect.

Anyways, please run svn update and try again.

-S

[knemunai](#) 50 posts since

Apr 16, 2008 12. Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask Jun 17, 2008 5:49 PM

in response to: [sujay](#) Sujay,

According to the lisdiag files it actually made it past reading the land mask, vegetation, soil texture, green vegetation fraction, and albedo files! For some reason it stopped after getting the 2nd forcing file (endrun is being called). Details are below. I did notice some 9.999E-03 in the lisdiag file so I attached one.

Thanks,

Kodi

A file called fort.11 was created (which it hasn't done before) and it says:

```
0080617 143439.669001 INFO PET2 Running with ESMF Version 2.2.2rp3
20080617 143439.682802 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
20080617 143439.683401 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
20080617 143439.683469 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
20080617 143443.214008 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
20080617 143443.214087 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
20080617 143443.214155 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
20080617 143443.214223 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
20080617 143443.214296 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
20080617 143443.214363 ERROR PET2 ESMF_Config.F90 328 ESMF_ConfigFindLabel label not found
liserr.124903.txt
```

[0] MPI Abort by user Aborting program !

[0] Aborting program!

Killed by signal 2.

Killed by signal 2.

Killed by signal 2.

lisout.124903.txt (parts)

Exited with exit code 1.

The output (if any) follows:

/home/jmonroe/LIS5r1383

Tue Jun 17 14:34:37 CDT 2008

mpichp4

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compiler directory pgi

ERR: Stopping.

p0_31413: p4_error: : 1

p0_31413: (13.414062) net_send: could not write to fd=6, errno = 32

P4 procgroup file is /home/jmonroe/.lsf_124903_genmpi_pifile. **Attachments:**

- [lisdiag.0000.txt](#) (4.3 K)

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Sep 20, 2007 13. **Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 18, 2008 9:19 AM

in response to: [knemunai](#) Kodi,

Not exactly sure about the crash, but the ESMF messages seem to indicate that your lis.config is not specified correctly. From a quick look it appears that the NLDAS section of the config file could be the culprit. Please refer to the nldas testcase (under src/testcases/baseforcing/nldas1) for a sample lis.config.

Make sure to remove the PET* files before you try a new run (so we only see the "fresh" errors).

-S

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Apr 16, 2008 14. **Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 18, 2008 10:53 AM

in response to: [sujay](#) Sujay,

Ok, looking at the test case I'm seeing the differences now. Thanks. What is the NLDAS elevation difference map? Is that for when using the LIS elevation map with the NLDAS forcing?

I'm running the NLDAS test case and will gradually change things over to what I was trying to run yesterday.

-Kodi

[sujay](#) 118 posts since

Sep 20, 2007 15. **Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 18, 2008 1:14 PM

in response to: [knemunai](#) Kodi,

You don't need to specify these options if you are not using elevation correction. For a more detailed description, please see my earlier post titled "Elevation correction with NLDAS forcing"

-S

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Apr 16, 2008 16. **Re: read_latlon_usgsmask.F90 for usgs_veg_umdmask** Jun 18, 2008 2:24 PM

in response to: [sujay](#) Ok, so I successfully ran the nldas test case. However, the noah test case crashes. The only changes I made were directing the output to scratch and I deleted a "/" because when it was getting the forcing files, the lisdiag file had FORCING/GDAS//. At this point I can't rule out the OU supercomputer because I'm getting a few different error messages each time I submit the exact same job and I've manage to core dump twice. The lisdiag

read_latlon_usgsmask.F90 for ...

files each end at different places: one is empty, one gets the second forcing file, one stops at getting the gfrac files...
When the lisdiag files do match up, they stop after getting the 2nd forcing file like yesterday.

I think the stderrs are the same:

[3] MPI Abort by user Aborting program !

[2] MPI Abort by user Aborting program !

Killed by signal 2.

Killed by signal 2.

Killed by signal 2.

and the stdout is similar to yesterday:

mpichp4

compiler directory pgi

p0_25523: p4_error: interrupt SIGx: 13

p0_25523: (14.226562) net_send: could not write to fd=6, errno = 32